

ABSTRACT OF THE DISCLOSURE

A method of manufacturing titanium electrodes in a vacuum arc remelting furnace as well as a reusable header for use in the remelting process is disclosed. An electrode may be attached to the reusable header and remelted in the furnace a number of times until a final ingot of the desired metallurgical quality is produced. The header and electrode are provided with a complimentary shaped interlocking recess and projection to secure them together. The electrode may alternatively be integrally formed with a starter stub that includes a recess or projection that interlocks with a complimentary shaped projection or recess on the header. At least a section of the header is made of the same metal as the electrode to be melted to reduce contamination of the ingot being formed in the furnace. Alternatively the starter stub is made from the same metal as the electrode.